

field had recently come in and if he had ever seen it elsewhere, he assured me that the "Blue-weed" has been frequent about Lakewood for twenty-five years and is said to be elsewhere in Monmouth County. Such information may be taken for what it is worth, but the frequency and thorough establishment of the plant along the River Road south of Lakewood is at least suggestive of the possible verity of this fuller statement.

ACADEMY OF NATURAL SCIENCES OF PHILADELPHIA.

TSUGA AMERICANA (MILL.) FARWELL, A FINAL WORD.

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IN RHODORA for October, 1918, pages 185-8, Mr. Tidestrom argues for the retention of the name *Tsuga Canadensis* (L.) Carr. for the Hemlock Spruce on the grounds that Linnaeus, in 1739, assisted in writing up the description of the plant for Gronovius's *Flora Virginica*, 1743, and hence was familiar with the species and therefore the element Linnaeus knew should be considered as the type; also that the word *submembranaceis* of the description excludes the White Spruce from consideration. He fails to prove, however, that the White Spruce was not equally known to Linnaeus; he only supposes that it was not. He says:—"That Linnaeus meant that his *P. Canadensis* should stand for a Spruce as we understand this genus is out of the question." Since Linnaeus included the "Spruce" as an element of his *Pinus Canadensis* it is rather astonishing, to say the least, to learn, "That Linnaeus meant it, is out of the question." Philip Miller, a contemporary of Linnaeus and a botanist of no mean ability, ranking perhaps in his day as second only to the distinguished Swede, and one who probably knew as much as any about the then current concept of species, certainly understood *Pinus Canadensis* Linn. to be the White Spruce. Note the description of each:—

PINUS CANADENSIS, Linn.
Pinus foliis solitariis linearibus
obtusiusculis submembranaceis.

ABIES CANADENSIS, Miller.
Abies (Canadensis) foliis linearibus
obtusiusculis submembranaceis.

With the exception of the word *solitariis* these descriptions are identical and it is *self-evident* that Miller adopted the specific name and

technical description from Linnaeus; also that if the word *submembranae* excludes the White Spruce in one instance it must in the other also. *Abies Canadensis* Miller as to name and technical description, but not as to plant, is a *pure synonym of Pinus Canadensis* Linn., thus leaving Miller's plant nameless; yet Mr. Tidestrom accepts *Picea Canadensis* (Mill.) Britt. If *Pinus Canadensis* Linn. (*Abies Canadensis* Mill. as to name bringing synonym) is legitimately construed as the Hemlock Spruce, then the *nameless plant* of Miller, the White Spruce, must be given a different appellation than the one by which it is now known since two species can not be given the same specific name when based upon the same earlier binomial. One or the other must drop the specific name *Canadensis*: if it is to be the Hemlock, then its name should be the one heading this article; if the White Spruce, the name for it should be *PICEA GLAUCA* (Moench.) Beissn. (*Pinus glauca* Moench, Verz. 73, 1785.)

For my part and with all due respect to Mr. Tidestrom, I fail to see that he has thrown any new light upon the subject; he has not shown the *determining incident occurring after 1753* that induced Linnaeus to create a new binomial or species, *if it were not*, as previously maintained by me, the *publication of Miller's plate and description*. If Linnaeus did not know the White Spruce, the plate of Miller illustrating it was second only to an actual specimen in hand and therefore he became through studying the figures as familiar with the Spruce as he could have been with the Hemlock from an examination of the Clayton fragmentary twig, some twenty odd years previously; he was at the time (when Miller's *figures* were brought to his attention) probably engrossed with the production of the 2nd Ed. of the *Species Plantarum*; his study of the Hemlock was brought to mind; he saw a greater resemblance in it to the Spruce than to the Balsam Fir; it was, therefore, taken out of *Pinus Balsamea* and placed under his new species, *P. Canadensis*, where it "should not be considered as necessarily belonging to the species, but that it was possible that such was the case;" having brought these two species together, that he used the old description of his own rather than that of a rival author was perfectly natural, and quite understandable. Since, however, the plate of Miller is the determining factor in the creation of *Pinus Canadensis*, it should be considered as the type.

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